

CLAIMS

1. A calibration system for a test system comprising:
a controller for coupling to a plurality of signal sources, wherein said controller is capable of adjusting the timing of an edge output from each of said signal sources;

a plurality of comparators for coupling to a plurality of signal lines coupled to said signal sources, and also coupled to said controller; and

an input line coupler for coupling said plurality of signal lines together by coupling to a socket of said test system, wherein said socket is coupled to said plurality of signal lines.

2. The system of Claim 1, wherein said input line coupler comprises an integrated circuit package for insertion into said socket.

3. The system of Claim 1, wherein said input line coupler comprises a delay compensation line.

4. The system of Claim 3, wherein said input line coupler comprises a silicon substrate.

5. The system of Claim 1, wherein said input line coupler comprises a dielectric substrate.

6. The system of Claim 1, wherein said input line coupler comprises a ball grid array (BGA) package.

7. The system of Claim 1, wherein said input line coupler comprises a leadless chip carrier (LCC).

8. The system of Claim 1, wherein said input line coupler comprises a dual in line package (DIP).

9. A method for determining a relative timing offset value for a test signal line belonging to a group of test signal lines in a test system comprising:

coupling the lines belonging to said group to all other lines in said group;

selecting a line from said group as a line under calibration;

applying a calibration edge to the line under calibration, wherein said calibration edge is applied at a

time preceding a reference trigger time value by a pretrigger offset time value;

Applying a group of complementary edges to the non-selected lines at a reference time value; and

observing a waveform feature of a composite waveform, wherein said composite waveform is a superposition of said complementary edges and a reflection of said calibration edges.

10. The method of Claim 9, further comprising adjusting said pretrigger offset time value, and repeating said applying of a calibration edge, said applying of a group of complementary edges, and said observing of a waveform feature of a composite waveform until a match is detected between a value for said waveform feature and a reference value.

11. The method of Claim 10, further comprising recording the relative timing offset value associated with the detection of said match.

12. The method of Claim 10, wherein said waveform feature is a trough in said composite waveform.

13. The method of Claim 12, wherein said reference value is approximately one half of an amplitude of said calibration edge.

14. The method of Claim 9, wherein said reference offset is less than a rise time of said calibration edge.

15. The method of Claim 14 wherein said reference offset is approximately equal to one third to one half of said rise time.

16. A method for calibrating a group of test signal sources and associated lines in a test system comprising:

coupling each of the signal lines in the group to each other;

selecting a line from said group;

determining a relative timing offset value for the selected line;

repeating said selecting and said determining a relative timing offset value until a relative timing offset value has been determined for each line in the group; and

adjusting a signal source for each associated line with respect to a reference trigger time value, using the relative timing value associated with each line.

17. The method of Claim 16, further comprising performing an initial alignment of the group of signal sources by performing time domain reflectometry (TDR).

18 The method of Claim 16, further comprising deskewing a group of comparators associated with the group of signal lines.

19 The method of Claim 16, wherein said deskewing comprises detection of a composite edge.

20. The method of Claim 19, wherein all of the signal lines are driven except for a signal line associated with a comparator being deskewed.